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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,994	05/19/2006	Toshihiro Kowaki	5404/150	7623
757 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			EXAMINER SANDERS, KRIELLION ANTIONETTE	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 06/12/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/579,994

## Applicant(s)

KOWAKI ET AL.

## Examiner

Kriellion A. Sanders

## Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/DE)  
Paper No(s)/Mail Date 5/06, 9/06, 10/07, 2/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

***Claim Rejections - 35 USC § 103***

**DETAILED ACTION**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 2003/071014, (EP 1 479 798 will be used for translation purposes) to Masuda et al. in view of Hochberg et al., US Patent No. 4,732,921 and Guthrie et al. US Patent No. 4,001,921.
3. Applicant's invention pertains to a flame retardant polyester fiber for artificial hair, formed from 100 parts by weight of (A) a polyester made of one or more of polyalkylene terephthalate or a copolymer polyester comprising polyalkylene terephthalate as a main component,
4. 5 to 30 parts by weight of (B) a brominated epoxy based flame retardant and
5. 0.05 to 1 parts by weight of (C) a reaction accelerator.
6. Masuda et al discloses a composition for formulating artificial hair that is rendered flame retardant by the addition of an organic cyclic phosphorus compound thereto. Such phosphorus compounds may be phosphites. The hair fibers range from 30-70 dtex. Masuda does not teach the addition of a brominated epoxy compound to the polyester artificial hair. See the abstract, page and 14 and page 17.
7. Hochberg teaches a flame-resistant polyester composition comprising polybutylene terephthalate. The composition may also include a brominated epoxy based flame retardant (See

the abstract). Hochberg teaches that the compositions comprise 100 parts by weight of polyester and 5 to 30 parts by weight of the bromine containing flame retardant (See col. 8, Table I and Example A. In the example PBT is 48.8 wt % and brominated epoxy resin is 9 wt %).

8. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the artificial hair composition of Masuda by adding the brominated flame retardant of Hochberg et al thereto to derive the usual flame rearding properties associate with the epoxy compounds. The ordinary practioner of the art would have also expected to have derived the added advantage of improving the fatigue strength and the melt flow (See the abstract of Hochberg.).

9. Guthrie teaches a polyethylene terephthalate composition which is spun into a yarn. (See col. 16, line 32) Patentee teaches that this composition can be treated with tris (dibromopropyl) phosphite (See col. 16, line 35). Guthrie also teaches that the tris (dibromopropyl) phosphate is one of the most frequently employed flame retardants (See col. 6, lines 36-37 and col. 6 lines 41-42).

10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the polyester composition of Masuda with the tris (dibromopropyl) phosphite of Guthrie to confer known flame retardant properties thereto. Each reference relates to fibers made from polyesters having flame retardants added thereto.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

Kriellion A. Sanders  
Primary Examiner  
Art Unit 1796

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